

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Sub 1

1. (Currently Amended) A surgical probe, comprising:
a relatively short, relatively stiff shaft defining a distal portion and a proximal portion;
an electrical conductor defining a conductor diameter extending through the shaft; and
an inflatable, energy transmitting lesion formation element associated with the distal portion of the shaft that allows substantially no liquid perfusion therethrough,
at least a portion of the inflatable, energy transmitting lesion formation element being microporous; and
an electrode, which defines an electrode diameter that is substantially larger than the conductor diameter, located within the inflatable, energy transmitting lesion formation element and operably connected to the electrical conductor.

2. (Canceled)

3. (Original) A surgical probe as claimed in claim 1, wherein the relatively short shaft is malleable.

4. (Original) A surgical probe as claimed in claim 3, wherein the proximal portion of the relatively short shaft is stiffer than the distal portion of the relatively short shaft.

5. (Canceled)
6. (Previously Presented) A surgical probe as claimed in claim 1, wherein the inflatable, energy transmitting lesion formation element includes a distally facing energy transmission region.
7. (Original) A surgical probe as claimed in claim 6, wherein the energy transmission region is annularly shaped.
8. (Original) A surgical probe as claimed in claim 7, wherein the energy transmission region surrounds a non-conductive region.
9. (Previously Presented) A surgical probe as claimed in claim 6, wherein the inflatable, energy transmitting lesion formation element includes a proximally facing non-conductive region.
10. (Previously Presented) A surgical probe as claimed in claim 1, wherein the inflatable, energy transmitting lesion formation element includes an energy transmission region and a non-conductive region and at least one of the energy transmission region and the non-conductive region define a color that visually distinguishes it from the other of the energy transmission region and the non-conductive region.
11. (Previously Presented) A surgical probe as claimed in claim 1, wherein the inflatable, energy transmitting lesion formation element is mounted on the distal portion of the shaft.

12. (Previously Presented) A surgical probe, comprising:
a relatively short, relatively stiff shaft defining a distal portion, a distal end and a proximal portion;
an inflatable, energy transmitting lesion formation element associated with the distal portion of the shaft that allows substantially no liquid perfusion therethrough;
and
a needle slidably mounted within the shaft and movable relative to the shaft such that a distal portion of the needle extends outwardly from the distal end of the shaft, the inflatable, energy transmitting lesion formation element being mounted on the distal portion of the needle.

13. (Previously Presented) A surgical probe as claimed in claim 12, wherein the needle comprises a plurality of needles and the inflatable, energy transmitting lesion formation element comprises a plurality of inflatable, energy transmitting lesion formation elements respectively mounted on the plurality of needles.

14. (Original) A surgical probe as claimed in claim 12, wherein the distal portion of the needle defines a preset curvature.

15. (Currently Amended) A surgical probe system, comprising:
a surgical probe including a relatively short, relatively stiff shaft defining a distal portion and a proximal portion, an electrical conductor defining a conductor diameter extending through the shaft, and an inflatable, energy transmitting lesion formation element associated with the distal portion of the shaft that allows substantially no liquid perfusion therethrough, at least a portion of the inflatable, energy transmitting lesion formation element being microporous, and an electrode, which defines an electrode diameter that is substantially larger than the conductor diameter, located within the inflatable, energy transmitting lesion formation element and operably connected to the electrical conductor; and

a fluid source operably connected to the inflatable, energy transmitting lesion formation element and adapted to maintain pressure within the inflatable, energy transmitting lesion formation element at a predetermined level.

16. (Original) A surgical probe system as claimed in claim 15, wherein the relatively short shaft is malleable.

17. (Canceled)

18. (Previously Presented) A surgical probe system as claimed in claim 15, wherein the inflatable, energy transmitting lesion formation element includes a distally facing energy transmission region.

19. (Previously Presented) A surgical probe system as claimed in claim 15, wherein the distally facing energy transmission region is annularly shaped.

20. (Original) A surgical probe system as claimed in claim 19, wherein distally shaped energy transmission region surrounds a non-conductive region.

21. (Previously Presented) A surgical probe system as claimed in claim 15, further comprising a pressure sensor adapted to determine the pressure within the inflatable, energy transmitting lesion formation element.

22. (Original) A surgical probe system as claimed in claim 21, wherein the pressure sensor is associated with the fluid source.

23. (Previously Presented) A surgical probe system as claimed in claim 15, wherein the fluid source comprises a pump.

24. (Currently Amended) A surgical probe system as claimed in claim 15, wherein the fluid source continuously infuses fluid to and ~~ventilates~~ receives ventilated fluid from the inflatable, energy transmitting lesion formation element.

25. (Previously Presented) A surgical probe system as claimed in claim 15, wherein the inflatable, energy transmitting lesion formation element is mounted on the distal portion of the shaft.

26. (Previously Presented) A surgical probe system, comprising:
a surgical probe including a relatively short, relatively stiff shaft defining a distal portion, a distal end and a proximal portion and an inflatable, energy transmitting lesion formation element associated with the distal portion of the shaft that allows substantially no liquid perfusion therethrough;

a fluid source operably connected to the inflatable, energy transmitting lesion formation element and adapted to maintain pressure within the inflatable, energy transmitting lesion formation element at a predetermined level; and

a needle slidably mounted within the shaft and movable relative to the shaft such that a distal portion of the needle extends outwardly from the distal end of the shaft, the inflatable, energy transmitting lesion formation element being mounted on the distal portion of the needle.

27. (Previously Presented) A surgical probe system as claimed in claim 26, wherein the needle comprises a plurality of needles and the inflatable, energy transmitting lesion formation element comprises a plurality of inflatable, energy transmitting lesion formation elements respectively mounted on the plurality of needles.


28. (Original) A surgical probe system as claimed in claim 26, wherein the distal portion of the needle defines a preset curvature.

29-32. (Canceled)

33. (Previously Presented) A surgical probe, comprising:
a hollow needle; and
a therapeutic assembly, located within the hollow needle and movable relative thereto, including a relatively short shaft defining a distal portion and a proximal portion, an inflatable, energy transmitting therapeutic element associated with the distal portion of the shaft and a hollow stylet movable relative to the relatively short shaft, the relatively short shaft being located within the stylet.

34-35. (Canceled)

36. (Previously Presented) A surgical probe as claimed in claim 33, wherein the hollow needle defines a preset curvature.

 37. (Previously Presented) A surgical probe as claimed in claim 33, wherein the inflatable, energy transmitting therapeutic element comprises an inflatable, energy transmitting lesion formation element.

39. (Currently Amended) A surgical probe system, comprising:
a surgical probe including a relatively short shaft defining a distal portion and a proximal portion, and an inflatable, energy transmitting therapeutic element associated with the distal portion of the shaft, an infusion lumen that extends proximally from the inflatable, energy transmitting therapeutic element, and a ventilation lumen that extends proximally from the inflatable, energy transmitting therapeutic element; and
a cooling fluid source operably connected to the inflatable, energy transmitting therapeutic element surgical probe and adapted to maintain pressure within the inflatable therapeutic element at a predetermined level and to continuously infuse and ventilate cooling fluid to and from the inflatable, energy transmitting therapeutic element by way of the infusion lumen and draw cooling fluid from the inflatable, energy transmitting therapeutic element by way of the ventilation lumen.

41. (Previously Presented) A surgical probe system as claimed in claim 39, wherein the cooling fluid source cools the inflatable, energy transmitting therapeutic element such that heat is only generated within tissue by virtue of the passage of current therethrough.

42. (Previously Presented) A surgical probe system as claimed in claim 39, wherein the inflatable, energy transmitting therapeutic element comprises a inflatable, energy transmitting lesion formation element.

43. (Previously Presented) A surgical probe system as claimed in claim 39, wherein the inflatable, energy transmitting therapeutic element is configured to allow substantially no liquid perfusion therethrough.

44. (Previously Presented) A surgical probe system as claimed in claim 39, wherein the relatively short shaft is malleable.

45. (Previously Presented) A surgical probe system as claimed in claim 39, wherein at least a portion of the inflatable, energy transmitting therapeutic element comprises micropores.

46. (Previously Presented) A surgical probe system as claimed in claim 39, further comprising a pressure sensor adapted to determine the pressure within the inflatable, energy transmitting therapeutic element.

47. (Previously Presented) A surgical probe system as claimed in claim 46, wherein the pressure sensor is associated with the cooling fluid source.

48. (Previously Presented) A surgical probe system as claimed in claim 39, wherein the cooling fluid source comprises a pump.

49. (New) A surgical probe system as claimed in claim 24, wherein the fluid source is operably connected to the inflatable, energy transmitting lesion formation element by an infusion lumen and a ventilation lumen.

50. (New) A surgical probe, comprising:
a relatively short, relatively stiff shaft defining a distal portion and a proximal portion; and
means, associated with the distal portion of the shaft, for inflating and transmitting current to tissue at a level sufficient to cause the formation of lesions without substantial liquid perfusion.

51. (New) A surgical probe as claimed in claim 50, wherein the relatively short shaft is malleable.

52. (New) A surgical probe as claimed in claim 51, wherein the proximal portion of the relatively short shaft is stiffer than the distal portion of the relatively short shaft.

53. (New) A surgical probe as claimed in claim 50, wherein the means for inflating and forming lesions in tissue without substantially liquid perfusion is mounted on the distal portion of the shaft.

54. (New) A surgical probe system, comprising:
a surgical probe including a relatively short shaft defining a distal portion and a proximal portion and an inflatable, energy transmitting therapeutic element associated with the distal portion of the shaft; and
a cooling fluid source operably connected to the inflatable, energy transmitting therapeutic element and adapted to maintain pressure within the inflatable therapeutic element at a predetermined level and to continuously infuse and ventilate cooling fluid to and from the inflatable, energy transmitting therapeutic element;

wherein at least some of the continuous ventilation of the cooling fluid occurs in a manner other than perfusion through the inflatable therapeutic element.

55. (New) A surgical probe system as claimed in claim 54, wherein the cooling fluid source cools the inflatable, energy transmitting therapeutic element such that heat is only generated within tissue by virtue of the passage of current therethrough.

56. (New) A surgical probe system as claimed in claim 54, wherein the inflatable, energy transmitting therapeutic element comprises a inflatable, energy transmitting lesion formation element.

57. (New) A surgical probe system as claimed in claim 54, wherein the inflatable, energy transmitting therapeutic element is configured to allow substantially no liquid perfusion therethrough.

58. (New) A surgical probe system as claimed in claim 54, wherein the relatively short shaft is malleable.

59. (New) A surgical probe system as claimed in claim 54, wherein at least a portion of the inflatable, energy transmitting therapeutic element comprises micropores.

60. (New) A surgical probe system as claimed in claim 54, further comprising a pressure sensor adapted to determine the pressure within the inflatable, energy transmitting therapeutic element.

61. (New) A surgical probe system as claimed in claim 60, wherein the pressure sensor is associated with the cooling fluid source.

62. (New) A surgical probe system as claimed in claim 54, wherein the cooling fluid source comprises a pump.